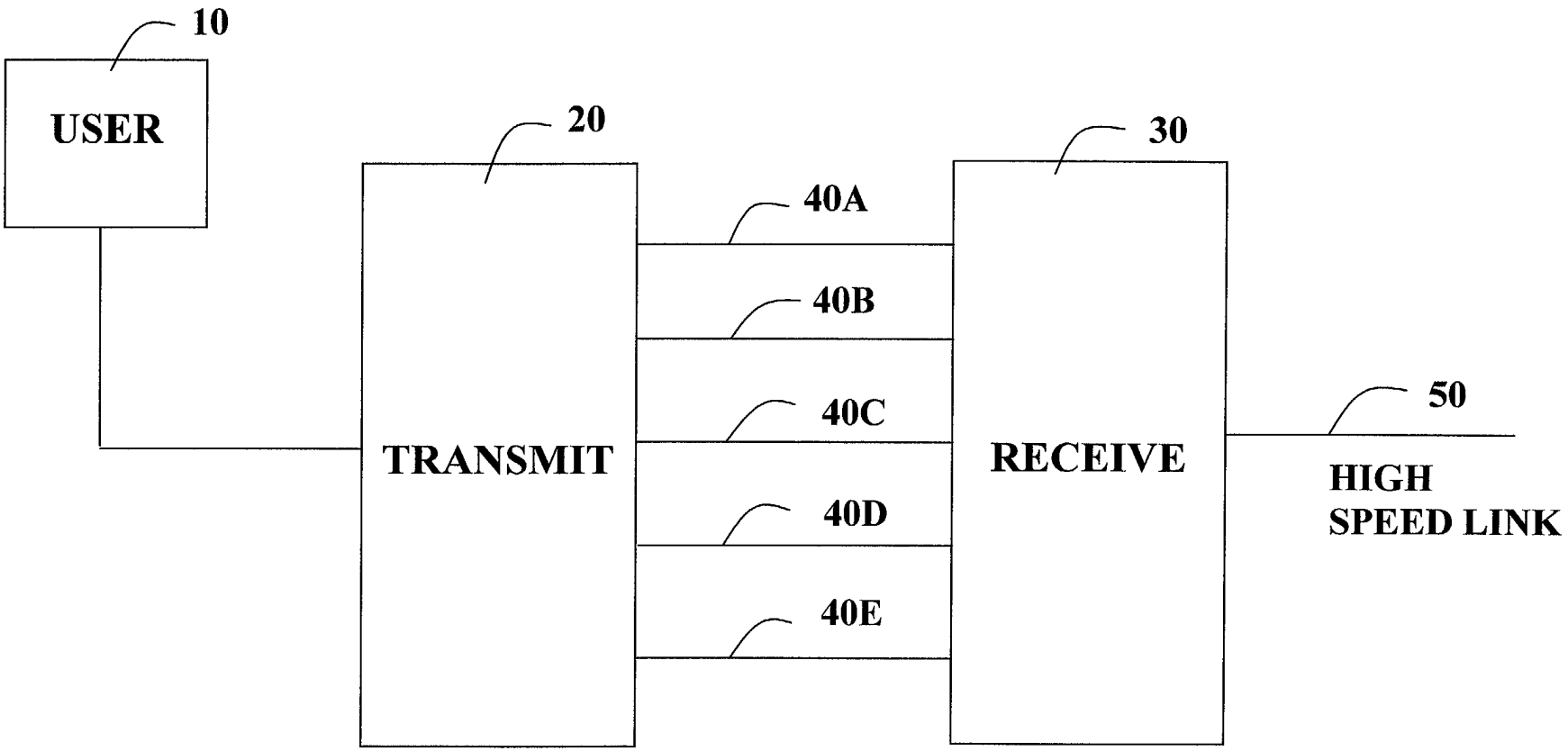

FIG. 1

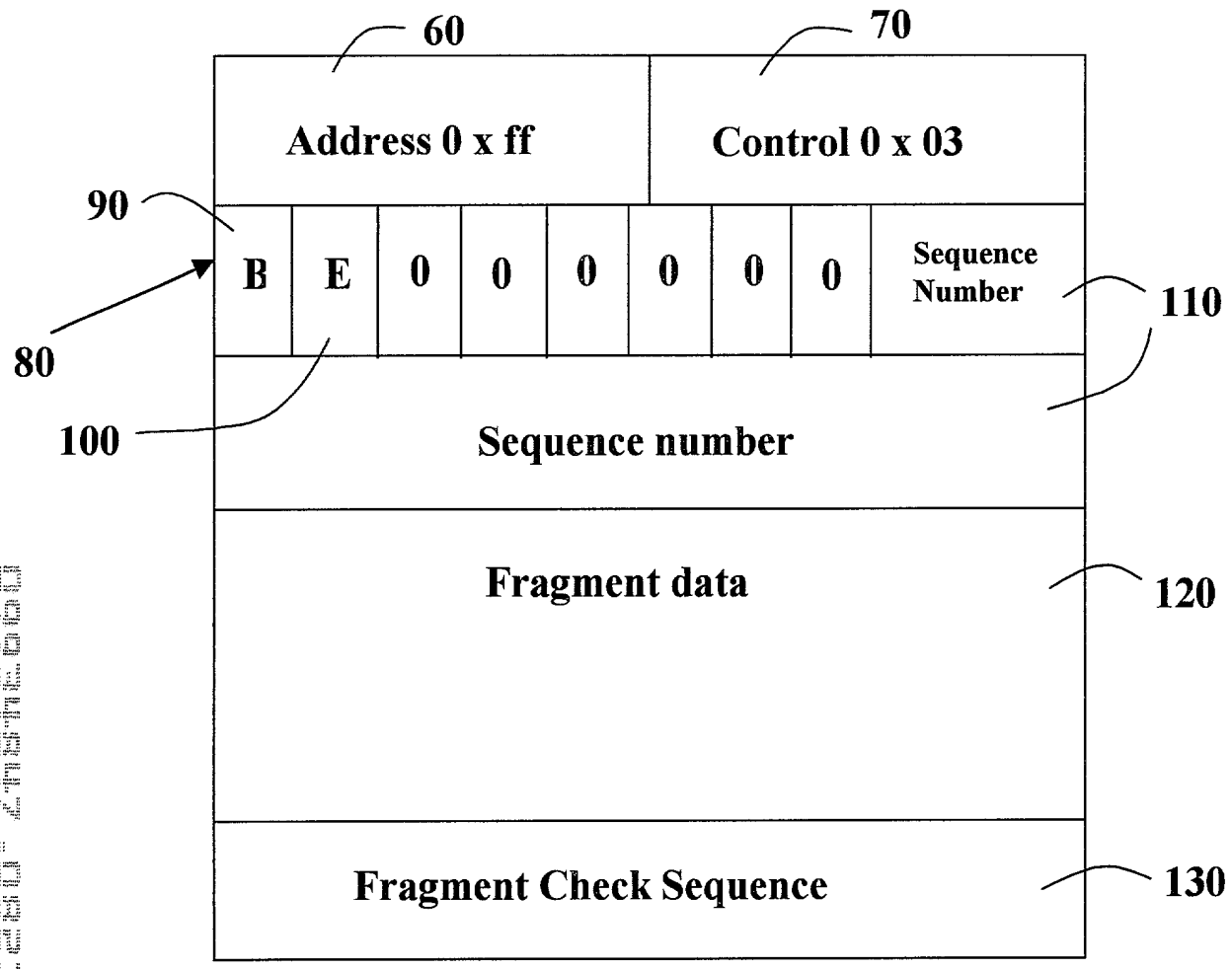
60
70
Address 0 x ff
Control 0 x 03
90
B
E
0
0
0
0
0
0
Sequence Number
110
80
100
Sequence number
Fragment data
120
Fragment Check Sequence
130

FIG. 2

Standard HDLC Frame

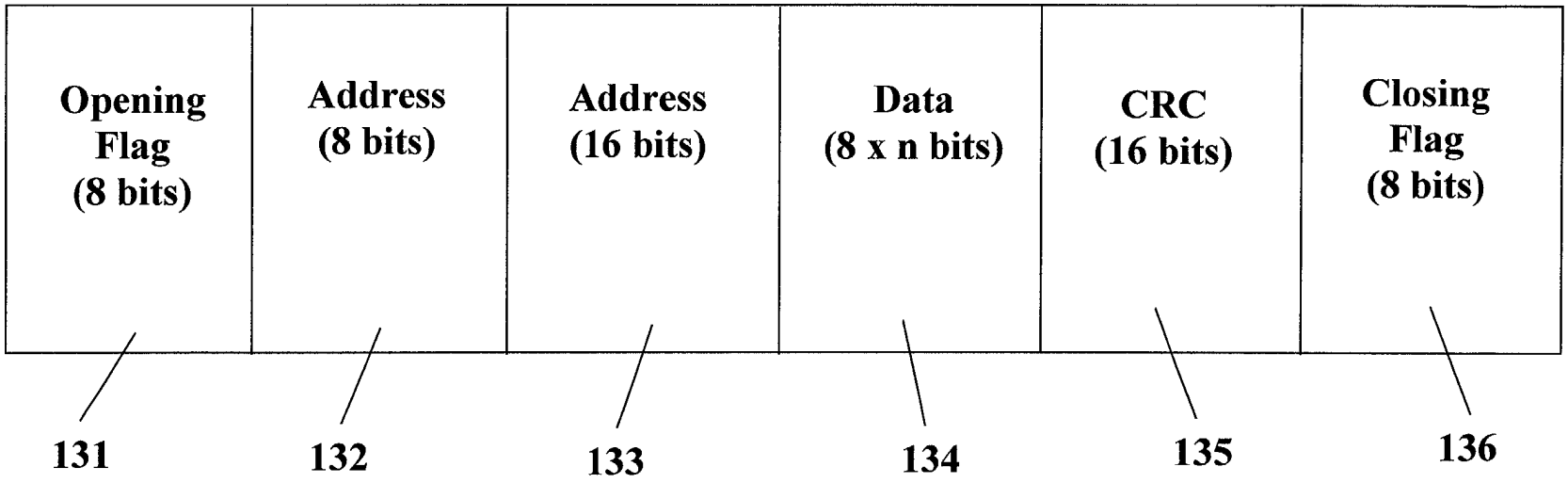

FIG. 2A

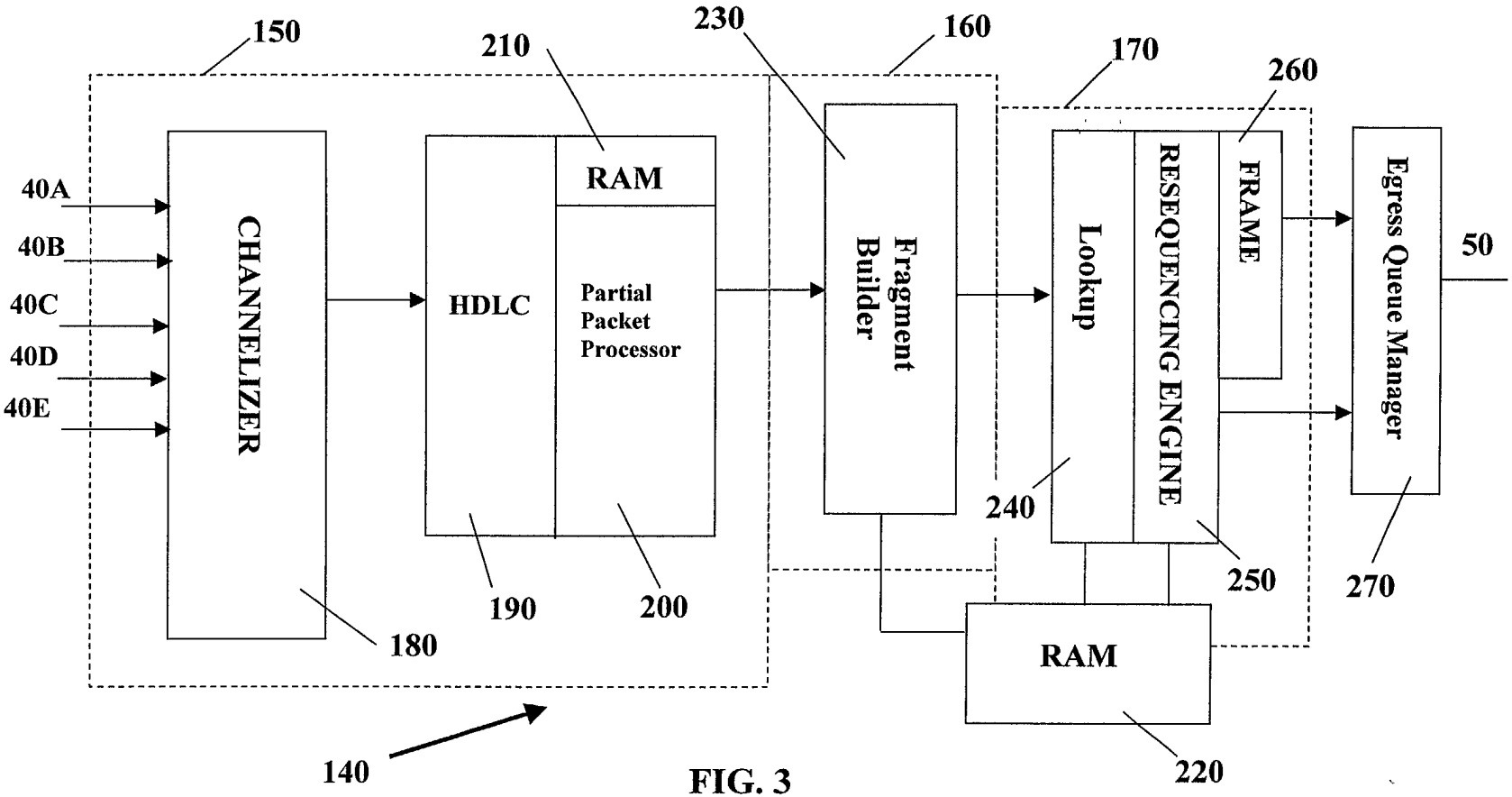

FIG. 3

Ptr Address	Memory Address	Next Ptr
A	000	B
B	031	C
C	063	D
D	095	NULL(END)
E	127	G
F	159	UNUSED
G	191	J
H	223	I
I	255	NULL
J	287	K
K	319	NULL

FIG. 4

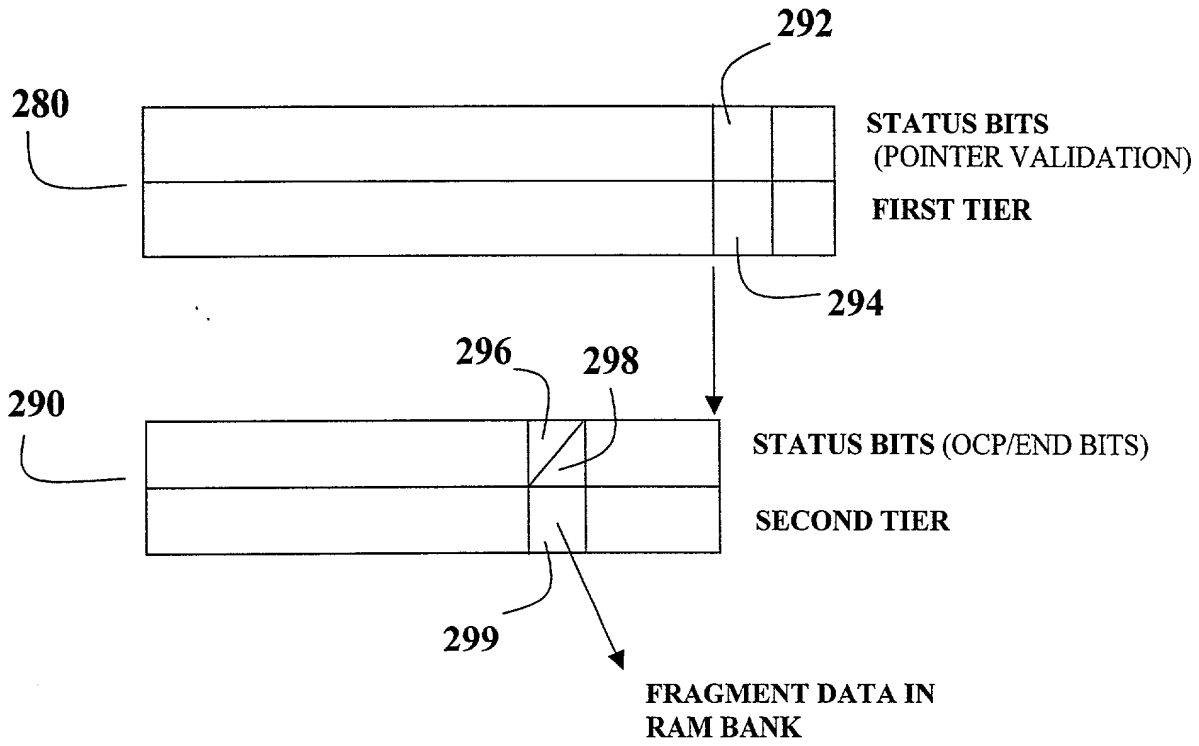
292
280
STATUS BITS
(POINTER VALIDATION)
FIRST TIER
294
296
298
290
STATUS BITS (OCP/END BITS)
SECOND TIER
299
FRAGMENT DATA IN
RAM BANK

FIG. 5

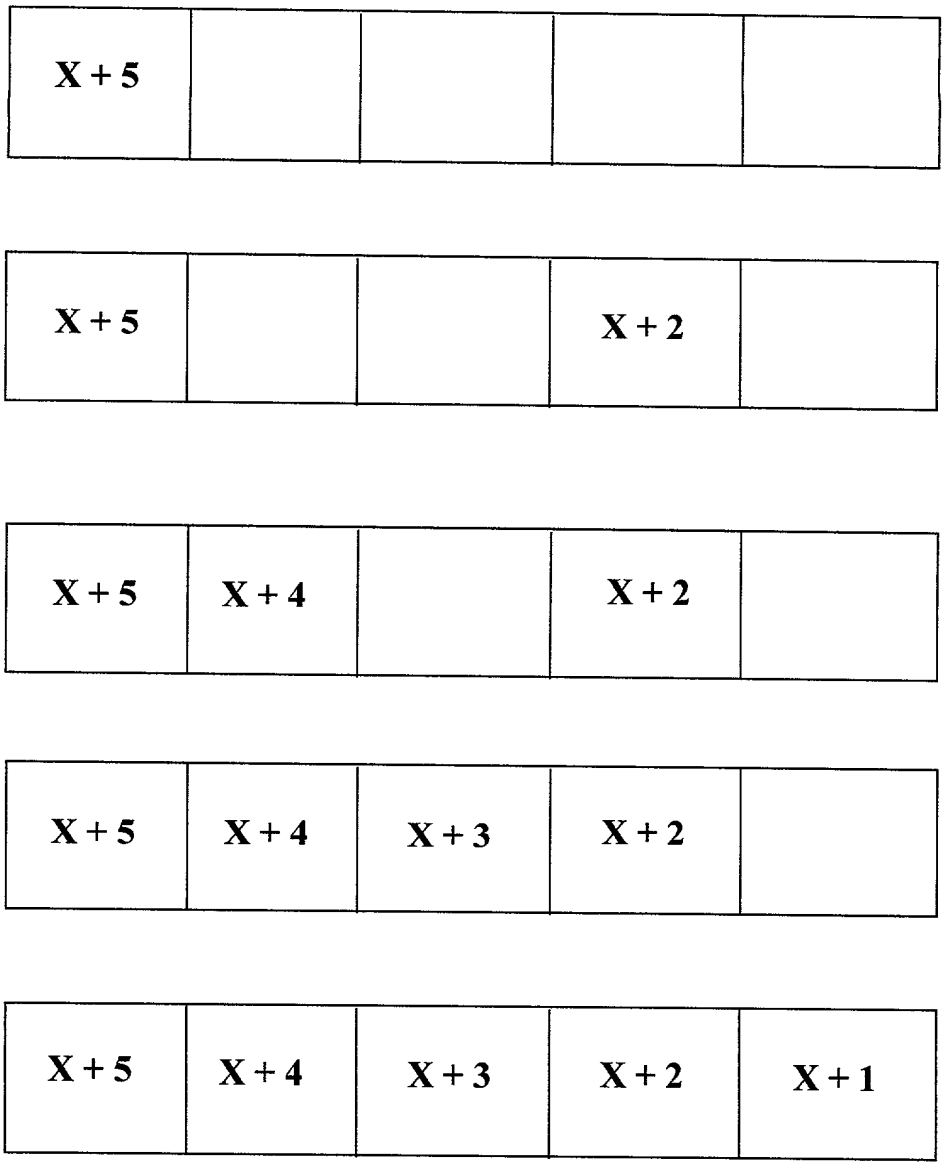

FIG. 6

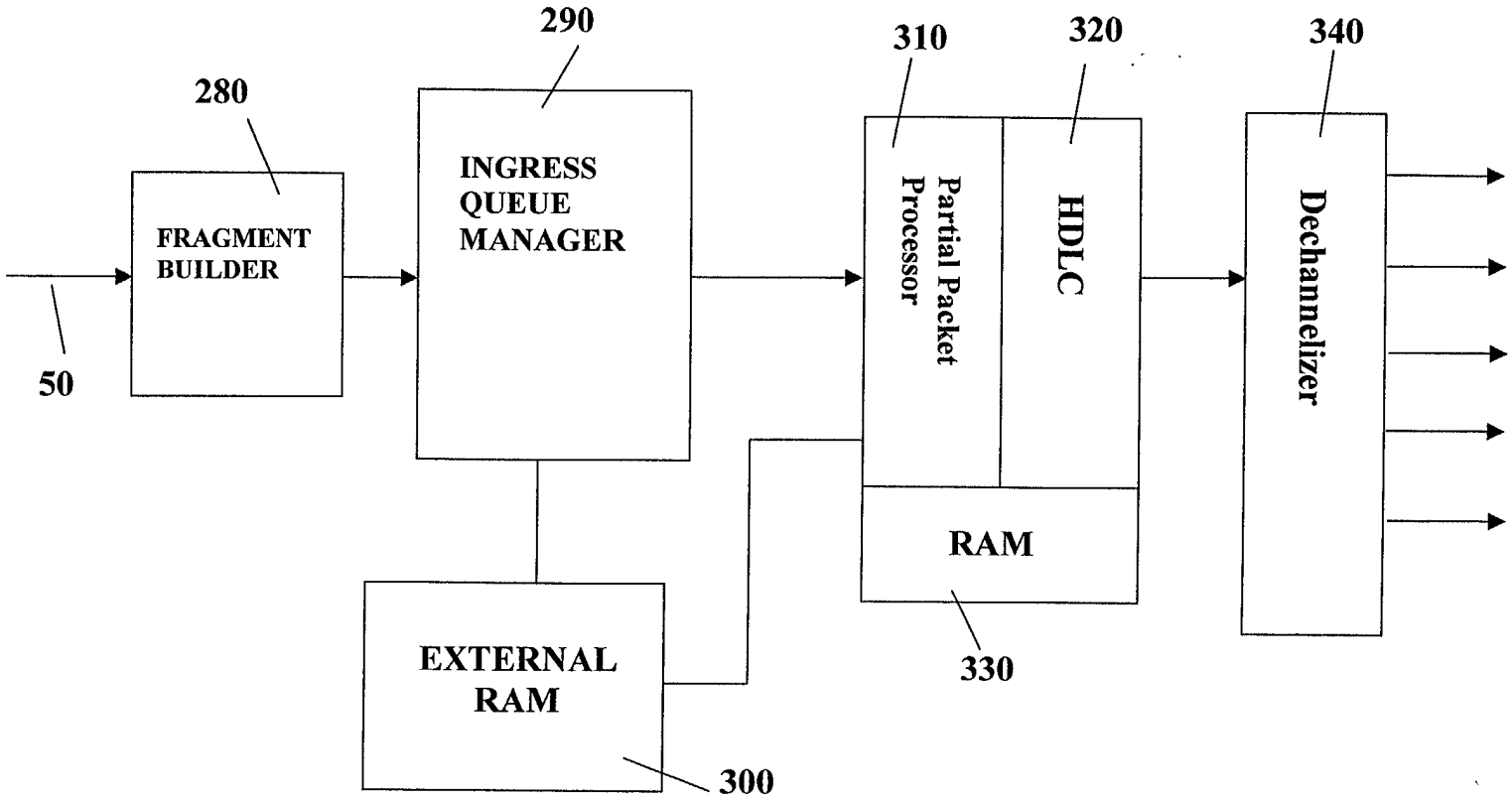

FIG. 7

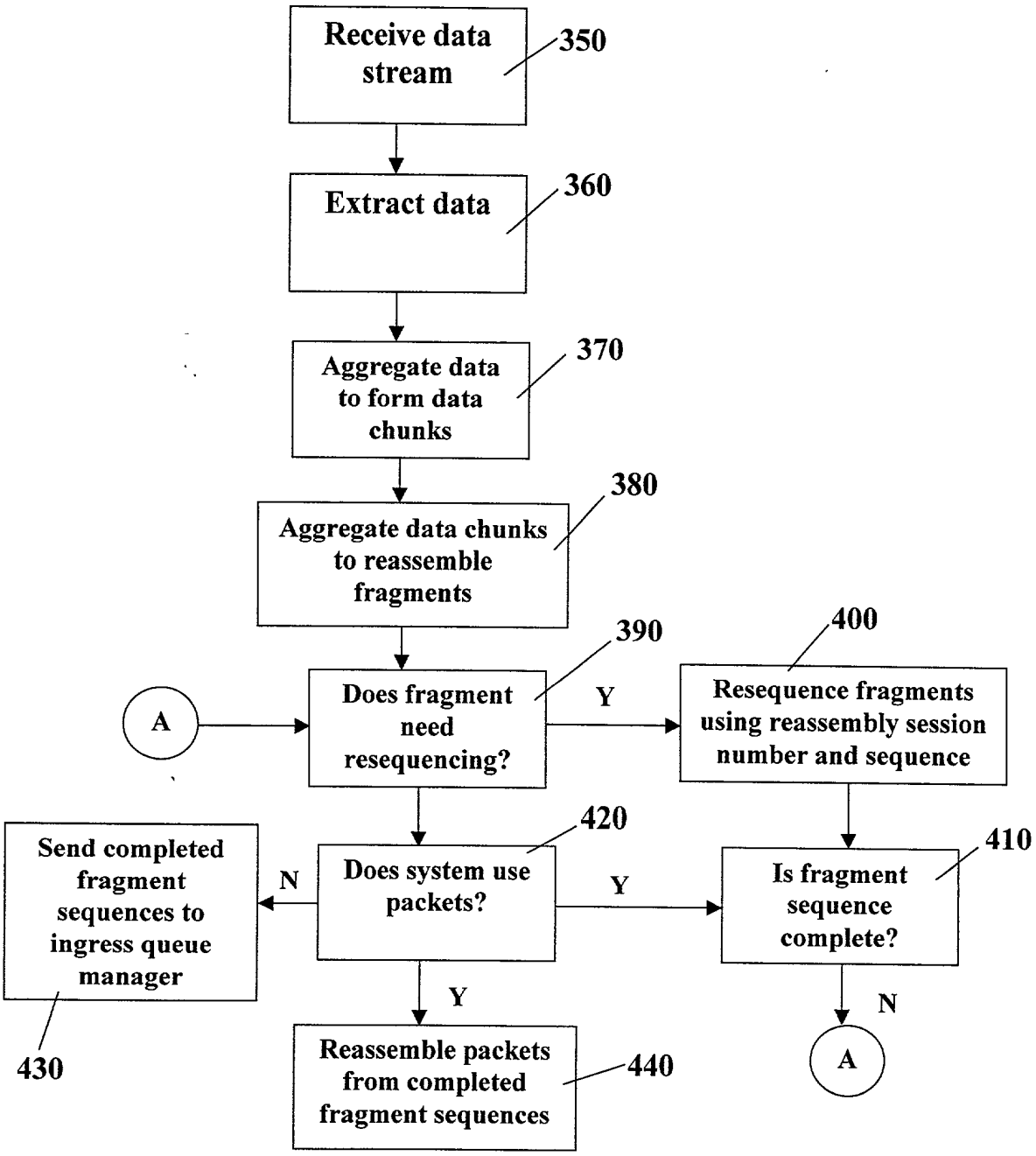
Receive data stream
350
Extract data
360
Aggregate data to form data chunks
370
Aggregate data chunks to reassemble fragments
380
A
Does fragment need resequencing?
390
Y
Resequence fragments using reassembly session number and sequence
400
Send completed fragment sequences to ingress queue manager
430
N
Does system use packets?
420
Y
Is fragment sequence complete?
410
Y
N
Reassemble packets from completed fragment sequences
440
A

FIG. 8

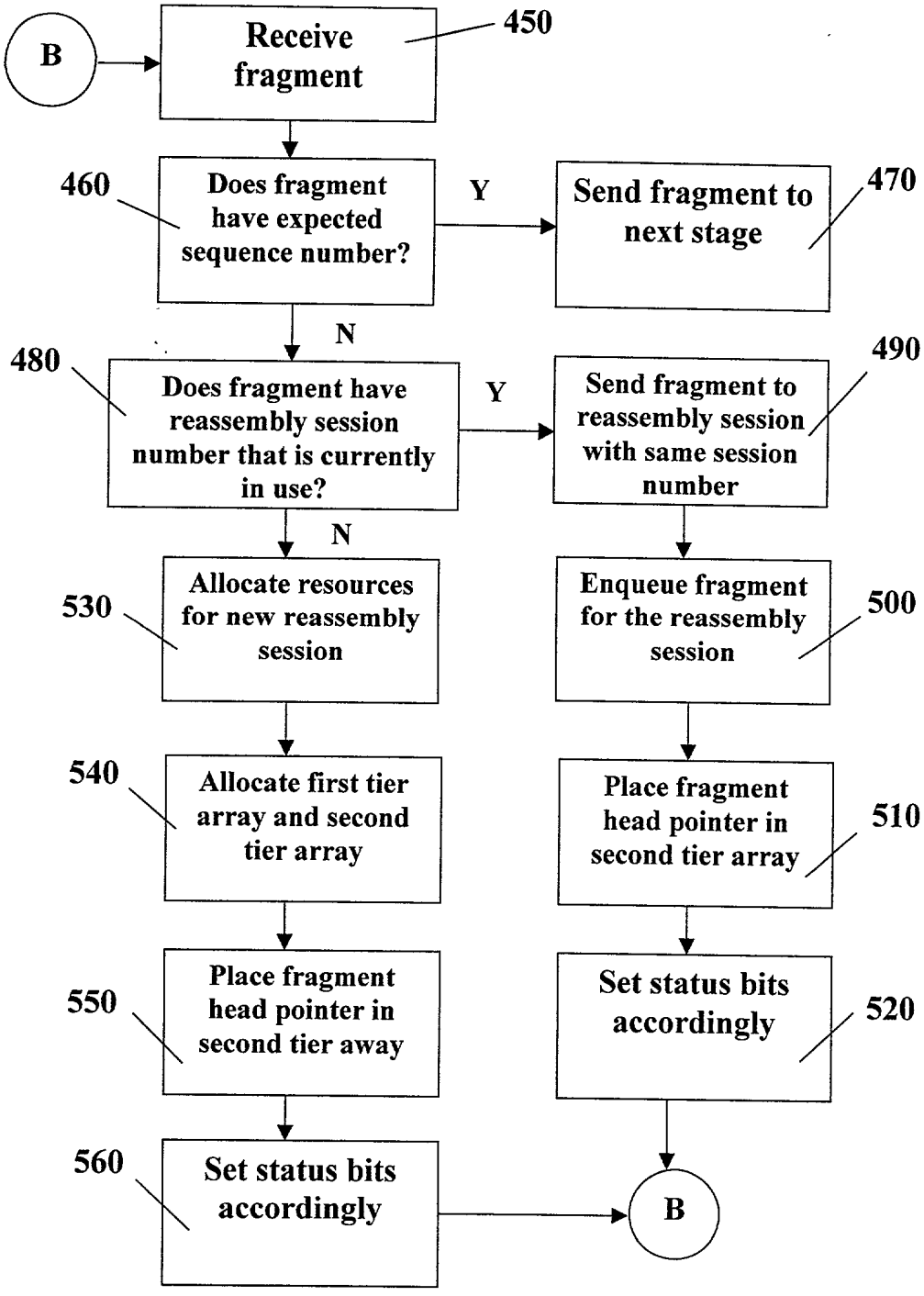
B
Receive fragment
450
460
Does fragment have expected sequence number?
Y
Send fragment to next stage
470
N
480
Does fragment have reassembly session number that is currently in use?
Y
Send fragment to reassembly session with same session number
490
N
530
Allocate resources for new reassembly session
Enqueue fragment for the reassembly session
500
540
Allocate first tier array and second tier array
Place fragment head pointer in second tier array
510
550
Place fragment head pointer in second tier away
Set status bits accordingly
520
560
Set status bits accordingly
B

FIG. 9

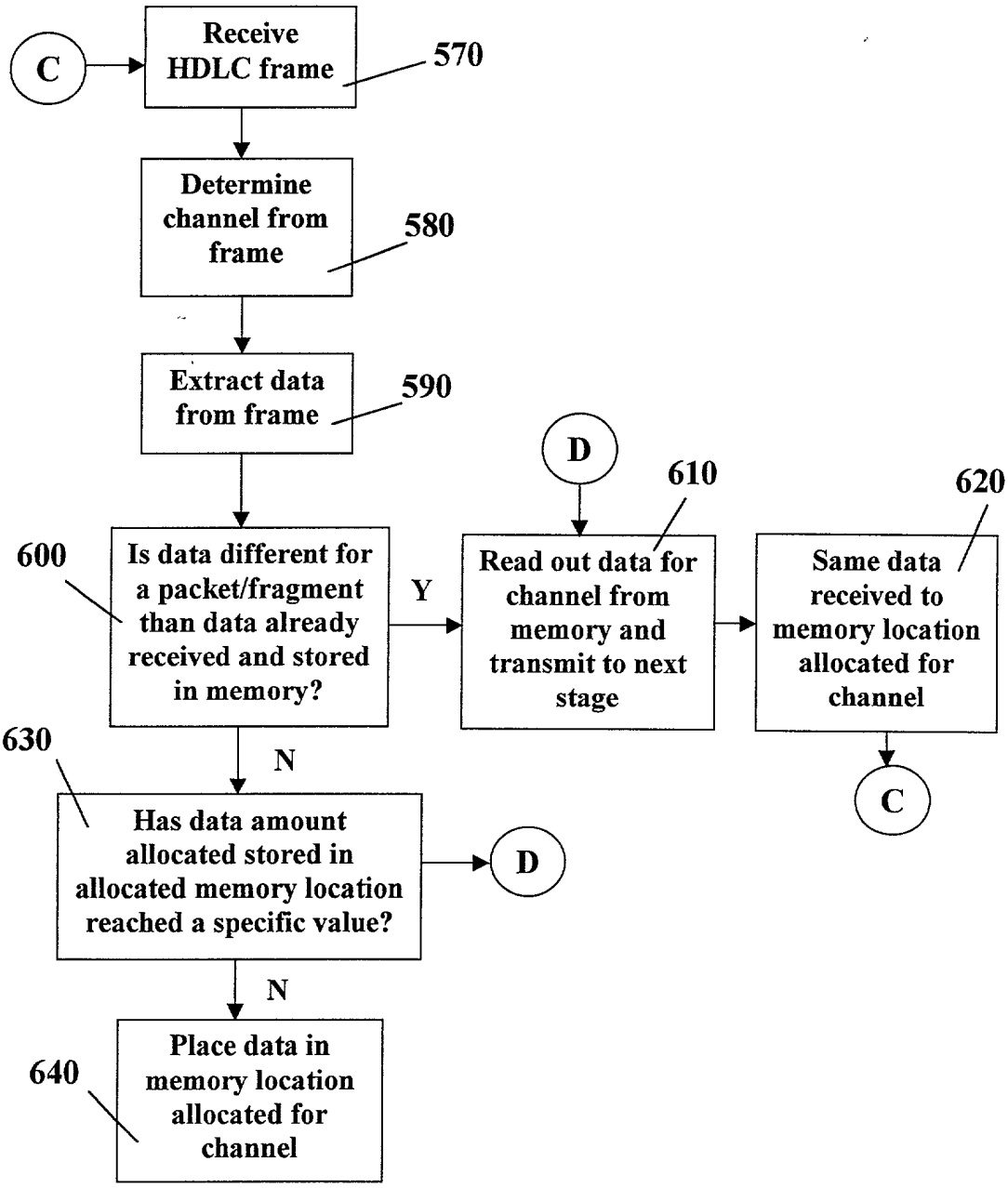
C
Receive HDLC frame
570
Determine channel from frame
580
Extract data from frame
590
D
610
620
600
Is data different for a packet/fragment than data already received and stored in memory?
Y
Read out data for channel from memory and transmit to next stage
Same data received to memory location allocated for channel
C
630
N
Has data amount allocated stored in allocated memory location reached a specific value?
D
N
640
Place data in memory location allocated for channel

FIG. 10

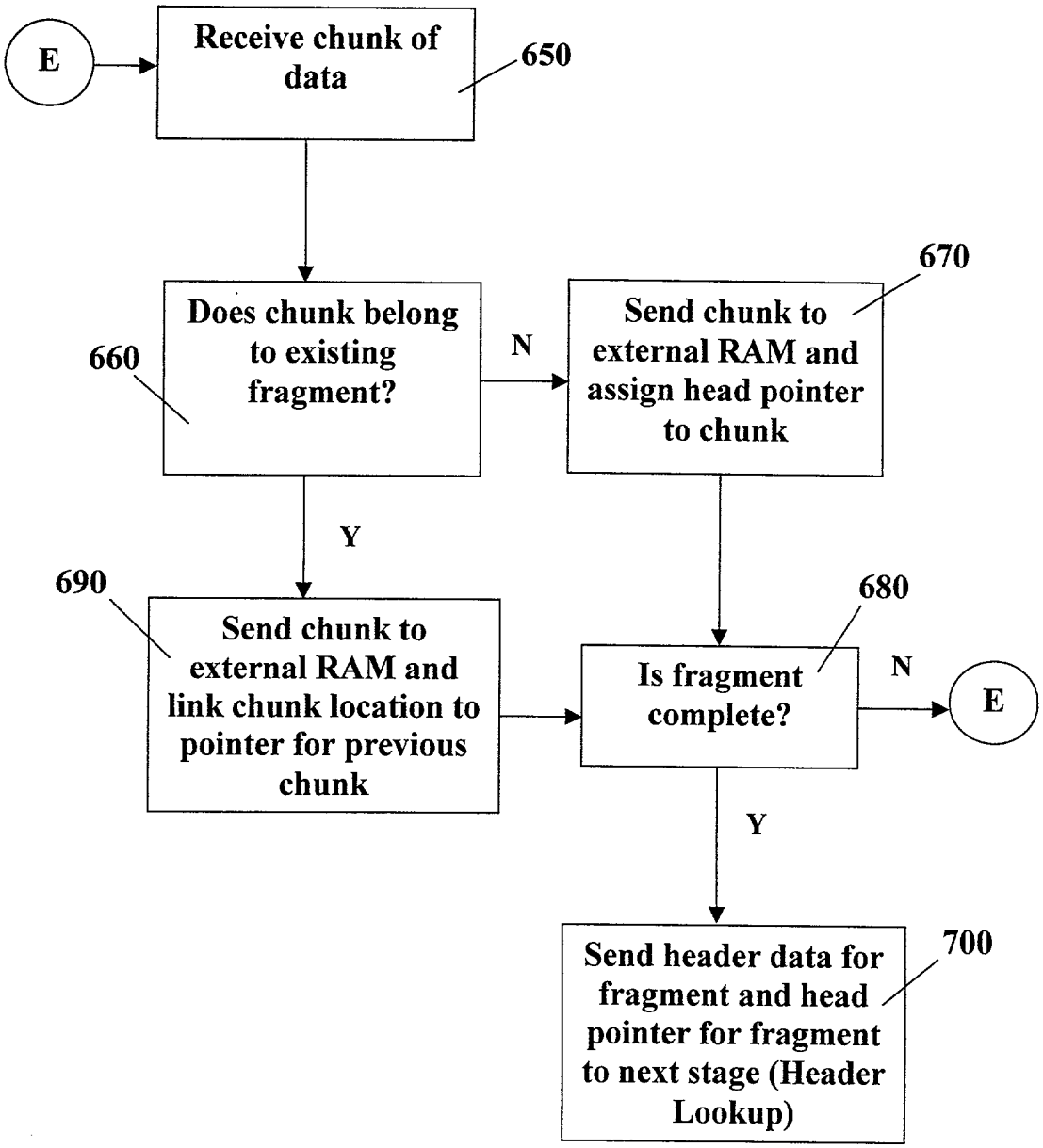
E
Receive chunk of data
650
Does chunk belong to existing fragment?
660
N
Send chunk to external RAM and assign head pointer to chunk
670
Y
690
Send chunk to external RAM and link chunk location to pointer for previous chunk
680
Is fragment complete?
N
E
Y
Send header data for fragment and head pointer for fragment to next stage (Header Lookup)
700

FIG. 11